UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
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Seattle, WA 98101-3140

OCT 11 2018

OFFICE OF
ENVIRONMENTAL CLEANUP

MEMORANDUM

SUBJECT: Action Memorandum for an Emergency Response Removal Action at the Mountain Home Mercury Site Pursuant to the On-Scene Coordinator's Delegated Authority under Section 104 of CERCLA

FROM: Stephen Ball, On-Scene Coordinator
Spill Prevention and Removal Unit
Emergency Management Program

THRU: Beth Sheldrake, Manager
Emergency Response Unit

TO: Administrative Record
Mountain Home Mercury Spill

I. Purpose

The purpose of this memorandum is to document the decision to initiate emergency response actions described herein for the Mountain Home Mercury Site (Site) located in Mountain Home, Elmore County, Idaho pursuant to the On-Scene Coordinator's delegated authority under Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9604.

II. Site Information

A. Site Description

Site Name:	Mountain Home Mercury Spill
Superfund Site ID (SSID):	10RD
NRC Case Number:	none
CERCLIS Number:	IDN001010128
Site Location:	1330 E 5th North, Mountain Home, ID 83647
County:	Elmore County
Lat/Long:	Latitude: 43.1355995 Longitude: -115.6833109
Potentially Responsible Party (PRP):	See Confidential Enforcement Addendum
Access:	Yes – verbal consent granted
NPL Status:	not listed
Removal Start Date:	August 7, 2018

B. Site Background

1. Removal Site Evaluation

A mercury spill was reported to the Idaho State Communications Center on August 7, 2018 at approximately 1800 hours. That evening, an Idaho Hazardous Materials Regional Response Team (RRT) responded, confirmed the spilled substance was mercury, and determined the spill was from a 6 fluid ounce container onto a private driveway. The mercury was suspected to have been tracked throughout the associated residence at 1330 E 5th North (source house) as well as to a neighboring residence at 1320 E 5th North. The RRT secured the scene and assessed both homes. Both homes had elevated mercury vapor inside the livings space. The RRT conducted an initial clean-up of the driveway of 1330 E 5th North and then demobilized. The RRT was unable to address mercury vapors inside the residences.

On the afternoon of August 8, 2018, the Idaho Department of Health and Welfare (IDHW) and the Idaho Department of Environmental Quality (IDEQ) requested the Environmental Protection Agency (EPA) assistance to further assess the spill and mitigate any remaining contamination. An EPA On-Scene Coordinator and an IDEQ representative immediately mobilized to the Site on the afternoon of August 8, 2018 and conducted an assessment using IDEQ's Lumex mercury vapor analyzer. After assessing the interior and exterior of the two homes, it was determined that additional remediation was needed at the source house (1330 E 5th North) and further assessment was needed at the neighboring home, 1320 E 5th North. The source house where the spill occurred had vapor concentrations exceeding 3,000 nanograms per cubic meter (ng/m^3) inside the home. Numerous visible mercury beads were present on the driveway. The neighboring home had vapor concentrations of approximately 600 ng/m^3 inside; however, the heating, ventilation, and air conditioning (HVAC) system was on which could bias the readings low. The EPA action level for mercury vapors in a residence is 1,000 ng/m^3. Based on the initial assessment done by EPA and IDEQ, EPA Emergency Rapid Removal Services (ERRS) and Superfund Technical Assessment and Response Team (START) contractors were mobilized to the scene and began additional assessment and removal activities on August 9, 2018.

2. Physical location and site characteristics

The Site is located at 1330 E 5th North, Mountain Home, Elmore County, ID 83647. The coordinates are latitude 43.1355995, longitude -115.6833109.

Mountain Home and Elmore County are approximately 43 miles east of Boise, Idaho on I-84, in south central Idaho.

The Site is a private residence located in a residential neighborhood. The landscape is dry and arid with predominantly maintained lawn and zero-scape vegetation. The property is bordered by a home to the west, apartments to the east, an open field to the north, and E 5th North to the south.

3. **Release or threatened release into the environment of a hazardous substance, pollutant or contaminant**

Mercury was released into the environment when a 6 fluid ounce glass container spilled into a box and then leaked onto a residential driveway. The property owner unknowingly walked through the contamination and tracked it into the home as well as a neighboring home. Numerous visible mercury beads were present on the driveway. Concentrations of mercury vapor in the air ranged from 500 ng/m^3 to 45,000 ng/m^3 on different areas of the driveway with cracks in the pavement exhibiting the higher readings in general.

Initial EPA assessments in the interior of the source residence at 1330 E 5th North indicated concentrations of 800 ng/m^3 to 3000 ng/m^3. At the neighboring residence, located at 1320 E 5th North, an initial assessment done by EPA and IDEQ showed maximum concentrations around 600 ng/m^3. These concentrations are usually indicative of a transfer of contamination and usually do not represent elemental mercury beads in the area.

Mercury is a hazardous substance pursuant to Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). Future releases from this Site could occur due to the property owner walking through contamination and tracking it into areas outside of the Site. In addition, family and friends or trespassers who visit the Site could transfer contamination into the community. Contamination could also be spread by the handling of contaminated items located on the Site.

Per ATSDR-Specific Health Consultation - Action Levels for Elemental Mercury Spills dated March 22, 2012, ambient conditions in residences should not exceed 1,000 ng/m^3 of mercury in the breathing zone of the most sensitive person under normal conditions for use. At or below this level, normal occupancy is acceptable. Additional action levels for personal items and/or vehicles, noted in this Specific Health Consultation, will be applied to the Site as applicable.

4. **National Priorities List**

The Site is not on, nor is it proposed for, the National Priorities List.

III. Threats to Public Health Welfare or the Environment

A. Nature of Actual or Threatened Release of Hazardous Substances, Pollutants or Contaminants.

The conditions at the Site met the following factors which indicate that the Site is a threat to public health or welfare of the United States or the environment and removal action was appropriate under 40 C.F.R. § 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

B. Applicable factors (from 40 CFR § 300.415) which were considered in determining the appropriateness of a removal action:

1. **Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants [300.415(b)(2)(i)].**
   Mercury was released into the environment when a 6 fluid ounce container spilled into a cardboard box and then onto a driveway. Beads of elemental mercury were observed distributed across the driveway and ambient air concentrations of mercury were as high as 45,000 ng/m^3 in this area. Contamination was then tracked into the two homes impacted by the spill. Based on an initial assessment conducted by EPA, one home had an initial maximum mercury vapor concentration of approximately 600 ng/m^3 and the other had a maximum concentration of 3,000 ng/m^3.

   Human receptors include the property owner, the property owner's family, and other visitors or trespassers to the Site. The surrounding area is a neighborhood community. There is great potential for any of these human receptors to transfer contamination into the community after visiting the Site. Per ATSDR-Specific Health Consultation - Action Levels for Elemental Mercury Spills dated March 22, 2012, ambient conditions in residences should not exceed 1,000 ng/m^3 of mercury in the breathing zone of the most sensitive person under normal conditions for use.

2. **High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate [300.415(b)(2)(iv)].**
   Visible beads of mercury contamination existed on the driveway of the Site. Mercury vapor concentrations of up to 45,000 ng/m^3 have been detected near the visibly contaminated driveway. Vapor concentrations of up to 3,000 ng/m^3 have been detected inside one residence. Interior concentrations are 3 times higher than the ATSDR action level for mercury vapors of 1,000 ng/m^3 in residential dwellings. Mercury is highly transferrable and can easily be spread by touching, walking or otherwise coming into contact with the contaminant and then coming into contact

with an un-contaminated surface as is proven by the observation that, at this Site, the mercury was originally spilled on the driveway and then ultimately spread into the homes on the feet of the residents.

3. **Weather conditions that may cause hazardous substances or pollutants to migrate or to be released [300.415(b)(2)(v)].**
Mercury volatilizes readily into the environment. Ambient air temperature directly impacts the amount and concentration of mercury that evaporates. Temperatures at the Site will be declining rapidly over the coming months due to the seasonal change to winter. It is difficult to detect mercury contamination at lower temperatures due to minimization of the contaminant volatilization. In the event of inclement weather, any clean-up would potentially need to be delayed at least six months. This delay would enable potential for spring rains and snowmelt to cause mercury contamination to migrate off site and for other mechanisms to spread contamination such as humans or pets walking through the area.

4. **The availability of other appropriate federal or state response mechanisms to respond to the release [300.415(b)(2)(vii)].**
IDEQ and IDHW lack the capability to address this release and requested EPA assistance.

IV. Selected Removal Action and Estimated Costs

A. Removal Action

1. **Removal action description**
EPA mobilized to the site on August 8, 2018 and work was concluded on August 12, 2018. On arrival, EPA established decision units and action levels. EPA contractors began assessments and cleanup by monitoring mercury vapor in the various decision units, removing contamination and contaminated material and preventing the spread of contamination. The neighboring residence at 1320 E 5th North was assessed by EPA contractors and no mercury vapor action level exceedances were found. Since mercury vapor readings in the house were below action levels the house was not considered contaminated and no further actions were taken. In the driveway of 1330 E 5th North mercury was removed using a mercury vacuum. The driveway was also treated with sulfur, vacuumed again, and large cracks were sealed with a commercial sealant. The workshop of 1330 E 5th North was assessed, floor mats removed and the floor treated with sulfur and Merc-X. Inside the living space of 1330 E 5th North select areas of carpet and padding that contained mercury contamination were removed. The house was subjected to heating and venting, before closing windows and allowing conditions to stabilize. Clearance sampling in accordance with EPA Environmental Response Team (ERT) guidance procedures was conducted in the workshop and living space of 1330 E 5th North over an eight-hour period. The average of

these readings was below the 1000 ng/m^3 residential action level at each location and therefore the remediation was considered successful. All items designated for disposal, investigation derived waste (IDW) and other site waste was placed into a cubic yard box and transported to US Ecology for disposal (200 pounds of waste). A re-occupation letter was issued to the resident of 1330 E 5th North by IDHW after a review of EPA clearance data.

A detailed account of this emergency response removal action can be found in the Trip Report for the Mountain Home Mercury Site Emergency Response written by Ecology and Environment, Inc. for EPA

2. **Contribution to remedial performance**
No long-term remedial action is anticipated at the Site.

3. **ARARs**
Removal actions conducted under CERCLA are required to attain Applicable or Relevant and Appropriate Requirements (ARARs) to the extent practicable. In determining whether compliance with ARARs is practicable, the On-Scene Coordinator may consider appropriate factors, including the urgency of the situation and the scope of the removal action to be conducted. Given the emergency nature of this action, EPA did not request a list of ARARs from the State. Based on experience working in the State of Idaho on similar sites, EPA has developed the following list of ARARs.

Federal ARARs:
Resource Conservation and Recovery Act 42 USC § 6901, Subtitle C-Hazardous Waste Management, 40 CFR Parts 260-279. Federal hazardous waste regulations specify hazardous waste identification, management, and disposal requirements. Mercury was found at the Site and is a RCRA hazardous waste. RCRA requirements for management, including disposal of those wastes will be applicable requirements for the Site. RCRA Subtitle C also provides treatment standards for debris contaminated with hazardous waste which is also applicable to any debris contaminated with hazardous waste at the Site. Below is a list of specific subparts and sections that have been identified in advance as likely applicable.

1) Part 261 "Identification and Listing of Hazardous Waste" and applicable to the work to be done on-Site because they provide the definitions and criteria for identifying hazardous waste.
2) Part 262 "Standards Applicable to Generators of Hazardous Waste" and more specifically Subparts A – D (40 CFR §§ 262.10 – 262.44) are applicable to the work because EPA's removal actions will result in gathering hazardous waste at the Site and storing it

temporarily for off-Site shipment to an appropriately-permitted facility.

3) Part 263 "Standards Applicable to Transporters of Hazardous Waste" are likely applicable.
4) Part 268 "Land Disposal Restrictions" and more specifically Subparts A, B, D, and E (40 CFR §§ 268.1 – 268.14 and 268.40 – 268.50) are applicable to the removal work because EPA will be arranging for the transport of hazardous waste for disposal which will most likely be land disposal at an appropriately-permitted facility.

Mercury Export Ban Act (MEBA) of 2008. The Mercury Export Ban Act of 2008 (MEBA) amends the Toxic Substances Control Act (TSCA) to prohibit the export of elemental mercury from the United States effective 1 January 1, 2013. MEBA also prohibits the sale, distribution, or transfer of elemental mercury under the control or jurisdiction of federal agencies to any other federal, state, or local government agency or to any private individual or entity, except for the transfer of elemental mercury to facilitate storage under MEBA.

To-be-Considered Materials:

To-be-Considered Materials (TBCs) are non-promulgated advisories or guidance issued by Federal or State governments that are not legally binding, and do not have the status of potential ARARs. However, in many instances TBCs may be considered along with ARARs in determining the level of cleanup for protection of health or the environment.

EPA/ATSDR Guidance Document for Mercury Vapor Action Levels
Per ATSDR Chemical-Specific Health Consultation - Action Levels for Elemental Mercury Spills dated March 22, 2012, ambient conditions in residences should not exceed 1,000 ng/m^3 of mercury in the breathing zone of the most sensitive person under normal conditions for use. At or below this level, normal occupancy is acceptable. In commercial settings such as retail establishments ATSDR recommends less than 3,000 ng/m^3 of mercury in the breathing zone. ATSDR recommends headspace readings for belongings that may have been contaminated by vapors from a mercury spill in the range of 3,000 to 6,000 ng/m^3 of mercury be considered protective of human health.

4. Project Schedule

Response activities commenced on August 7, 2018 and were completed on August 12, 2018.

B. Estimated Costs*

Contractor costs (ERRS/START staff, travel, equipment)	**$80,000**
Other Extramural Costs (Strike Team, other Fed Agencies)	**$0**
Contingency costs (up to 20% of subtotal)	**$16,000**
Total Removal Project Ceiling	**$96,000**

*EPA direct and indirect costs, although cost recoverable, do not count toward the Removal Ceiling for this removal action. Liable parties will be held financially responsible for costs incurred by the EPA as set forth in Section 107 of CERCLA. "

V. Expected Change in the Situation Should Action Be Delayed or Not Taken

If the proposed removal action had been delayed or not taken, there would have remained a continued potential for direct exposure to mercury. If the source of mercury had not been removed immediately, there would have been a high potential for the CERCLA hazardous substance to continue to be tracked into the home on the property or other areas in the community where vapors would potentially present an unacceptable risk to human health.

VI. Outstanding Policy Issues

None.

VII. Enforcement

Refer to the attached Confidential Enforcement Addendum.

VIII. Approvals

This decision document represents the selected removal action for this Site, developed in accordance with CERCLA, and not inconsistent with the NCP. This decision was based on the Administrative Record established for the Site.

Conditions at the Site met the criteria in Section 300.415(b) of the NCP for a removal action and through this document and pursuant to Delegation R10 14-2, dated June 26, 2017, which redelegates authority to the On-Scene Coordinator for taking emergency response actions pursuant to Section 104 of CERCLA costing up to $250,000, I have approved the described removal actions which took place between August 8 and August 12, 2018. The total project ceiling is $96,000. This amount is funded from the Regional removal allowance.

S. L. Ball

09/28/2018

Stephen Ball
Federal On-Scene Coordinator

Date

IX. Endangerment Determination under CERCLA Section 106: Hazardous Substances

Actual or threatened releases of hazardous substances from this Site may present an imminent and substantial endangerment to public health, or welfare, or the environment.

Betty T Shelby

for Calvin Terada, Program Manager
Emergency Management Program

9/28/18
Date